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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,787	01/18/2002	Hiroshi Echizen	03560.002983	9569

5514 7590 03/18/2003

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EXAMINER

VERSTEEG, STEVEN H

ART UNIT	PAPER NUMBER
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1753

DATE MAILED: 03/18/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/050,787

Applicant(s)

ECHIZEN ET AL.

Examiner

Steven H VerSteeg

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: “)” needs inserted before “,” at [0008], line 6.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6, 8, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 11-29863 (JP ‘863).
4. For claim 1, Applicant requires a sputtering method for forming a film on a substrate in a film forming space while monitoring emission intensity of the plasma comprising detecting a thickness of the film formed; comparing a detected value with a preset value; and deciding a target value of the emission intensity in accordance with a compared result.
5. For claim 8, Applicant requires a sputtering apparatus comprising a film forming container, a substrate feeding mechanism, and an emission intensity monitor. The apparatus also comprises a film thickness measuring device that measures the film thickness and produces a result and a comparator that compares the output with a preset value and outputs a target value of the emission intensity monitor.

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6. JP '863 discloses a process comprising forming a film while monitoring the emission intensity [0018] comprising detecting the thickness of the film, comparing that value to a preset value, and deciding a target value for the emission intensity [0018]. The apparatus comprises a substrate feeding mechanism (Figure 1), emissivity monitor [0018], film thickness measuring device [0018], and comparator [0018].

7. For claim 2, Applicant requires a flow rate of at least one of the gases introduced to the film forming space to be controlled such that the actual emission intensity is adjusted at the target value of the emission intensity. For claim 9, Applicant requires a gas flow rate control mechanism that controls the flow rate of at least one the gases introduced. JP '863 discloses a gas flow control mechanism [0018] that controls the flow rate of the gas introduced to control the emission intensity [0018].

8. For claim 3, Applicant requires a target containing In. For claim 4, Applicant requires the target to be a cylindrical rotating target. JP '863 discloses the use of an In-containing rotating cylindrical target [0022].

9. For claim 5, Applicant requires oxygen gas. JP '863 uses oxygen gas [0018].

10. For claim 6, Applicant requires the target value to fall in a predetermined range defined beforehand. JP '863 discloses the limitation [0018].

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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12. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-29863 (JP '863).

13. For claim 7, Applicant requires that if the target value deviates from the predetermined range, sputtering is stopped.

14. JP '863 discloses that target value to be in a predetermined range, but does not specifically state that the sputtering is stopped if the value is outside that range. Such a limitation would have been obvious. If sputtering is continued when the value is outside of the range, then defective products will be produced. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of JP '863 to stop sputtering if the value is outside the range because of the desire to not produce defective products.

Conclusion

In the event that papers are missing from this communication, please contact the Customer Service Center for Technology Center 1700 at (703) 306-5665.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven H VerSteeg whose telephone number is (703) 305-4473. The examiner can normally be reached on Mon - Thurs (7:30 AM - 6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam X Nguyen can be reached on (703) 308-3322. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

A handwritten signature in black ink, appearing to read 'Steven H VerSteeg', with a long horizontal flourish extending to the right.

Steven H VerSteeg

Primary Examiner

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shv

March 11, 2003